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Alexandria, Virginia 22313-1450

on this 2nd day of May, 2007.

By: Beverly L. Middleton  
Beverly L. Middleton



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ward  
Serial No.: 10/768,263  
Filing Date: January 30, 2004  
Title: Mechanically Sealed Adjustable Gas  
Nozzle

Examiner: Christopher Kim  
Group A.U.: 3752

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Commissioner for Patents  
P. O. Box 1450  
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**PRELIMINARY AMENDMENT AND RESPONSE**

Dear Sir:

In preparing a response to the Final Office Action dated January 25, 2007, with an Appeal Brief, the applicant discovered a potential Section 112 issue as it related to the independent claims and thought that it would best be addressed through a Request for Continued Examination. Specifically, the first restricted orifice of the adjusting member is proximate to the second end of the nozzle body member as opposed to the first end. This change is provided for both independent claim 1 and 17.

Secondly, claims 4, 10 and 15 were also duplicative in subject matter of other claims from which they depended. They have been cancelled.

Additionally, the Examiner has provided a new obviousness rejection which the applicant believes is the best rejection provided to date. Nevertheless, problems with O rings are disclosed in the specification as originally filed in paragraph 0014 on page 6. Amendments to the independent claims address this problematic structure cited by the Office Action.

As it relates to the anticipation reference based on Hinchman, it is observed that the Examiner states that Hinchman does not disclose by-pass passageway **18** as being sealed. The applicant respectfully disagrees for a number of reasons.

The Applicant would propose that there are only a few ways in which gas of any kind can get into bore **18**. First it could leak into bore **18** past shoulder **14**, threaded socket **16** and seat **15**. However, this connection is a “gas tight joint” (Col. 2, lines 15-16).

Second, gas could pass through passageway **29, 33** and go back upstream past head **31**. However, Claims 1 and 17 explicitly prohibit such an interpretation since gas through the by-pass passageway cannot proceed through the first passageway (which was equated to passageway **29,33** by the Office Action).

Furthermore, the Office Action appears to argue that gas could leak past threaded connection **12,30** proceeding from bore **11** past connection of threads **12,30** past lock nut **32** and into bore **18**. In order to achieve such a construction (which is not believed to be suggested or described in the Hinchman reference), one would need to ignore the Hinchman specification which explicitly requires at the bottom of Col. 2, line 53-Col. 3, line 1 for the lock nut **32** to be “screwed down **tight** against the seat **15**”(emphasis added). This appears to be a similar mechanical connection that created the “gas tight joint” of the head section **8** to the body section **7**. This connection created by the tightening of the lock nut **32** against the seat **15** would force the threads **30** securely against threads **12** and/or the internal threads of the nut **32** with the face of the nut against the seat **15** being “tight” against the seat **15**. There are eleven revolutions of threads **30** against threads **12** and four revolutions of threads **30** against the internal thread of the nut **32** shown in Figure 1. With a lock nut **32** installed to be “tight”, it is difficult to envision a scenario where this would not be a gas tight joint. Also, if gas leakage were to be anticipated

from such a connection, the Applicant would expect that Hinchman would have described such a gas flow. Furthermore, the proposed construction interpretation would appear to render the purpose of the regulator **24** of Hinchman unsuitable for its stated purpose as apparently regardless of the position of the sleeve **25** against the seat **19**, the same pressure and flow would be provided to the hole **23** as would, based on the Examiner's interpretation of Hinchman, apparently be compensated through the bore **18** if acting as an alternative gas passageway.

Allowance of claims 1 and 17 and those depending therefrom is respectfully requested since the Hinchman reference not only does not anticipate, it also teaches away from the proposed construction.

Additionally, the bore **29** is relied on by the Office Action as a first restricted orifice is not at an end of the adjusting member as required by the independent claims. Accordingly, for the lack of at least these two separate elements, Hinchman does not teach the claim limitations, and in fact, teaches away from them.

### **Conclusion**

This Request for Continued Examination addresses a potential Section 112 issue as it relates to the orientation of the adjusting member relative to the nozzle body member and distinguishes the cited references from the claimed subject matter. Accordingly, claims 1-3, 5-9, 11-14 and 16-20 are now believed to be allowable over the prior art and such action is respectfully requested. A Petition for Extension of Time for one month and fee are enclosed herewith.

Respectfully submitted,

Date: 5/2, 2007

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